

7. SOUTHWORTH–VASHON

The Southworth–Vashon route is a segment of the Fauntleroy–Vashon–Southworth group of routes and connects south Kitsap County to north Vashon Island. With a segment length of only 1.6 nautical miles, the crossing takes approximately 10 minutes to complete. In addition, this route indirectly provides service to downtown Seattle, as a significant number of walk-on passengers make a transfer at Vashon to/from the Seattle–Vashon passenger-only ferry.

The following ridership statistics for the Southworth–Vashon route include all passengers – those traveling between Southworth and Vashon as well as those traveling between Seattle and Southworth via a transfer at Vashon to/from the Seattle–Vashon passenger-only route.

In 2003, average daily vehicles and drivers numbered 374 and passengers, 230, for a total of 604 riders. This about one-third less than the annual average ridership in 1999, with a disproportionate share of the decrease exhibited in combined walk-on and in-vehicle passengers. Several factors may account for this trend beyond the series of fare increases since 1999; these are discussed further below.

During October 2003, the month in which the survey was conducted, average daily ridership totaled 548. PM peak period ridership on the survey day, October 15, 2004, was estimated via boarding counts at 369 patrons, or about 10% lower than observed in 1999. Of these 369 riders, 58 boarding as pedestrians made a transfer to/from the Seattle–Vashon passenger-only route.

It is interesting to note that eastbound (to-island) was the dominant travel direction in 1999, at 61% of all trips. The survey results for 2003 suggest that eastbound PM peak travel has fallen off sufficient to cause westbound (from-island) to become the dominant direction, with eastbound trips now only accounting for 27% of all travel. This change may in part be the result of declining manufacturing activity at the K2 factory on Vashon Island.

The following presentation of survey analysis results and geographic travel patterns is based upon those riders traveling to/from Vashon only; information for riders making a transfer to/from the Seattle–Vashon passenger-only ferry is presented in Chapter 8.

To differentiate between the two groups of travelers on this route and to better account for actual travel patterns, the Southworth–Vashon route has been refined to include only those passengers traveling between Southworth and Vashon. Survey results for Southworth–Vashon passengers making a transfer to/from the Seattle–Vashon passenger-only ferry are presented in Chapter 8.

“Survey results for Southworth–Vashon passengers making a transfer to/from the Seattle–Vashon passenger-only ferry are presented in Chapter 8.”

Lastly, non-peak ridership and travel information have not been included for the Southworth–Vashon route due to the low response rate on this route, as was the case during

the 1999 survey. The 2003 survey resulted in a total of only 14 responses from all modes after segregating the handful of Vashon transfers. The low number of responses is likely due to relatively low overall ridership and a short crossing time, which limits the opportunity for riders to complete the questionnaire en route. The number of usable surveys from the PM non-peak period is too low to yield representative expanded ridership results, and therefore have not been included in the analysis results or discussion.

7.1 TRIP MAKING INFORMATION

Weekday Trip Statistics

Weekday trip statistics presented here are grouped into three topics:

- Trip purpose and usage frequency;
- Origin and destination types; and
- Travel modes.

Trip Purpose

The trip purpose and frequency for the weekday PM peak period for the Southworth-Vashon route in both directions are summarized in Table 7-1 and Table 7-2. These results are based on expanded PM peak survey period ridership, which had declined from 366 in 1999 to 294 in 2003, a 20 percent decrease.

Looking at the results found in these tables it is evident that this route serves commuter oriented travelers during the PM peak period. The overriding majority of PM peak period riders were traveling for work/school/business purposes, with 80% of all survey respondents reporting work/school/business related travel in 2003 and 1999. Ridership frequency reported by Southworth-Vashon PM peak period riders also suggests regular commuter-oriented travel, with 58% of 2003 respondents reporting 10 or more trips in the past seven days, similar to the 55% in 1999. Overall the frequency of use and trip purpose distribution during the PM peak did not change significantly between 1999 and 2003.

Table 7-1
Trip Purpose and Frequency of Use Distribution
Southworth-Vashon – Weekday PM Peak Period (2003)

<i>Frequency of Use / Trip Purpose</i>	<i>Work/School/ Business Related</i>	<i>Medical Appt./ Personal Business/ Other</i>	<i>Social/ Recreational/ Shopping/ Sight-seeing</i>	<i>All Trip Purposes</i>	<i>Expanded Ridership Total</i>
1st Ride in Past 7 Days*	5.0%	0.0%	16.0%	5.2%	15
2 to 5 Rides in Past 7 Days	11.3%	71.9%	45.4%	21.6%	63
6 to 9 Rides in Past 7 Days	23.0%	6.7%	28.0%	21.4%	63
10 or More Rides in Past 7 Days	57.6%	21.4%	10.5%	49.3%	145
No Answer	3.2%	0.0%	0.0%	2.5%	7
Totals	100.0%	100.0%	100.0%	100.0%	294
Overall Trip Purpose Distribution	79.6%	12.5%	8.0%	100.0%	
Expanded Ridership	234	37	23	294	

* 1st Ride in Past 7 Days includes passengers who answered: 1st ride in past year and 1st ride ever.

Table 7-2
Trip Purpose and Frequency of Use Distribution
Southworth-Vashon – Weekday PM Peak Period (1999)

<i>Frequency of Use / Trip Purpose</i>	<i>Work/School/ Business Related</i>	<i>Medical Appt./ Personal Business/ Other</i>	<i>Social/ Recreational/ Shopping/ Sight-seeing</i>	<i>All Trip Purposes</i>	<i>Expanded Ridership Total</i>
1st Ride in Past 7 Days*	11.0%	16.3%	0.0%	10.1%	37
2 to 5 Rides in Past 7 Days	6.5%	24.7%	55.2%	13.8%	51
6 to 9 Rides in Past 7 Days	20.7%	43.6%	34.4%	24.2%	88
10 or More Rides in Past 7 Days	55.1%	15.4%	10.4%	46.5%	170
No Answer	6.7%	0.0%	0.0%	5.4%	20
Totals	100.0%	100.0%	100.0%	100.0%	366
Overall Trip Purpose Distribution	79.8%	8.2%	12.0%	100.0%	
Expanded Ridership	292	30	44	366	

* 1st Ride in Past 7 Days includes passengers who answered: 1st ride in past year and 1st ride ever.

Trip Origin and Destination Types

Table 7-3 and Table 7-4 summarize the trip origin and destination types by direction during the weekday PM peak period. Eastbound (to island) PM peak travel represented only 27% of trips in 2003, down from 61% in 1999. None of the eastbound PM peak travel was home to work/school in 2003, whereas 42% was reported as home to work/school in 1999. This may reflect the decline in manufacturing activity at the K2 factory on Vashon Island.

Westbound travel represented 73% of the PM peak trips in 2003, up from 39% in 1999. However, the type of travel did not change, with the vast majority of trips coming from work/school and going to home (85% in 1999 and 91% in 2003).

Table 7-3
Trip Origin and Destination Types by Direction
Southworth-Vashon – Weekday PM Peak Period (2003)

<i>Origin & Destination Types</i>		<i>Destination Shares Across All Origins:</i>			<i>Expanded Ridership Total</i>
<i>Origin Place</i>	<i>Destination Place</i>	<i>Eastbound Trips</i>	<i>Westbound Trips</i>	<i>Both Directions</i>	
Home	Home	0.0%	0.0%	0.0%	0
	Work/School	0.0%	2.3%	1.7%	5
	Other	0.0%	0.0%	0.0%	0
Work/School	Home	65.6%	90.7%	83.9%	246
	Work/School	0.0%	0.0%	0.0%	0
	Other	9.8%	0.0%	2.7%	8
Other	Home	19.6%	7.0%	10.4%	31
	Work/School	0.0%	0.0%	0.0%	0
	Other	5.1%	0.0%	1.4%	4
Totals		100.0%	100.0%	100.0%	294
Travel Direction Distribution		27.2%	72.8%	100.0%	
Expanded Ridership		80	214	294	

Table 7-4
Trip Origin and Destination Types by Direction
Southworth-Vashon – Weekday PM Peak Period (1999)

<u>Origin & Destination Types</u>		<u>Destination Shares Across All Origins:</u>			<u>Expanded Ridership Total</u>
<u>Origin Place</u>	<u>Destination Place</u>	<u>Eastbound Trips</u>	<u>Westbound Trips</u>	<u>Both Directions</u>	
Home	Home	9.4%	0.0%	5.7%	21
	Work/School	42.4%	0.0%	25.9%	95
	Other	0.0%	6.8%	2.7%	10
Work/School	Home	24.9%	85.0%	48.3%	176
	Work/School	1.1%	3.4%	2.0%	7
	Other	0.0%	0.0%	0.0%	0
Other	Home	22.2%	4.7%	15.4%	56
	Work/School	0.0%	0.0%	0.0%	0
	Other	0.0%	0.0%	0.0%	0
Totals		100.0%	100.0%	100.0%	366
Travel Direction Distribution		61.1%	38.9%	100.0%	
Expanded Ridership		224	142	366	

Travel Modes

This section presents the survey responses related to trip patterns, boarding method and, for walk-boardings, modes of access and egress, all of which are aggregated across both travel directions.

The access and egress modes to the ferry along with the boarding method for the Southworth-Vashon route are presented in Table 7-5 and Table 7-6 for the 2003 and 1999 PM peak periods, respectively. Unlike 1999 results, in-vehicle and walk-on boarding were reported on a nearly equal basis in 2003. The share of PM peak period riders boarding as walk-ons increased from 21% in 1999 to 48% in 2003. In 1999, 71% of walk-board respondents reported arriving at the ferry terminal by vehicle and nearly 50% departed by vehicle; in 2003 the results are almost exactly opposite, with 43% reporting vehicle access and 73% reporting vehicle egress. Interestingly, in 2003 approximately 50% of walk-on riders access the ferry terminal by bus or shuttle, compared to 16% in 1999.

While the change in walk-board access and egress results are quite dramatic, the results for access and egress responses are not always as statistically robust as for other survey questions. In many instances these questions can be confusing to the survey respondent and they may skip them, or respondents may run out of time. As a result of potential errors and/or incomplete responses, apparent differences in access/egress results between 1999 and 2003 may overstate the true differences.

Table 7-5
Access Mode to Ferry – Boarding Method – Egress Mode from Ferry
Southworth-Vashon – Weekday PM Peak Period (2003)

<i>Access Mode to Ferry Terminal</i>	<i>Percent Distrib.</i>	<i>Boarding Method</i>	<i>Percent Distrib.</i>	<i>Mode Shares</i>	<i>Egress Mode from Ferry Terminal</i>	<i>Percent Distrib.</i>
Pedestrian/Bicycle	5.4%	Walked-On		47.6%	Pedestrian/Bicycle	0.0%
By Vehicle*	43.3%	Pedestrian	100.0%		By Vehicle*	72.8%
By Bus or Shuttle	51.3%	Pedestrian w/ Bicycle	0.0%		By Bus or Shuttle	27.2%
Total	100.0%	Total	100.0%		Total	100.0%
In-Vehicle	100.0%	In-Vehicle		52.4%	In-Vehicle	100.0%
		Vehicle Drivers*	79.2%			
		Vehicle Passengers	20.8%			
		Total	100.0%			
		Total		100.0%		
		Expanded Ridership Total		294		

* includes motorcycles

Table 7-6
Access Mode to Ferry – Boarding Method – Egress Mode from Ferry
Southworth-Vashon – Weekday PM Peak Period (1999)

<i>Access Mode to Ferry Terminal</i>	<i>Percent Distrib.</i>	<i>Boarding Method</i>	<i>Percent Distrib.</i>	<i>Mode Shares</i>	<i>Egress Mode from Ferry Terminal</i>	<i>Percent Distrib.</i>
Pedestrian/Bicycle	13.4%	Walked-On		21.2%	Pedestrian/Bicycle	11.1%
By Vehicle*	70.9%	Pedestrian	100.0%		By Vehicle*	46.6%
By Bus or Shuttle	15.7%	Pedestrian w/ Bicycle	0.0%		By Bus or Shuttle	42.3%
Total	100.0%	Total	100.0%		Total	100.0%
In-Vehicle	100.0%	In-Vehicle		78.8%	In-Vehicle	100.0%
		Vehicle Drivers*	55.6%			
		Vehicle Passengers	44.4%			
		Total	100.0%			
		Total		100.0%		
		Expanded Ridership Total		366		

* includes motorcycles

7.2 GEOGRAPHIC TRAVEL PATTERNS

This section provides tables and map figures which present the locations for ferry user trip origins and destinations. PM peak period origin-destination (O-D) trip tables by travel direction are presented as expanded PM peak ridership volumes and distributions for all modes, as well as for walk-on and in-vehicle boardings. The trip tables for all modes are followed by tables indicating the differences between 1999 and 2003. Complementing the trip tables are two sets of map figures. The first set shows the geographic flows of origins and destinations, including route district percentage distributions, for all trips by direction. These maps also include a pie chart for each district, indicating the boarding mode split by walk-on and in-vehicle boardings for trips originating from or destined to each district. The second set of maps illustrates the directional densities of trip origins and destinations, using different pinpoint symbols to delineate walk-on and in-vehicle boarding methods.

Weekday PM Peak Period Trip Patterns

Considering all boardings modes, the North Vashon district was the most frequent origin for westbound travel during the weekday PM peak period with 61% of the total (see Table 7-7 and Figure 7-1), a decrease from 74% in 1999. The most popular westbound destination was the Other South Kitsap County district with 69% of the total (an increase from 47% in 1999), with the Greater Port Orchard district the second most frequent destination with a 8% share (a decrease from 21% in 1999). As shown in Table 7-8, Other South Kitsap County experienced the most significant change in westbound trip destinations, with an increase of 121%, while South Vashon Island experienced an increase of 127% in trip origins.

The most popular destination for eastbound travel during for the weekday PM peak period was the North Vashon district, which captured 65% of the total share, as seen in Table 7-9 and Figure 7-2. In 1999, North Vashon had a 77% share of destination trips. Riders on this route were mainly coming from the Other South Kitsap County district (35%) and Greater Bremerton district (25%). The share of trips originating in North/Other Central Kitsap County decreased from 19% in 1999 to 9% in 2003. As shown in Table 7-10, that district experienced the most significant change in trip origins, with an 88% decrease since 1999.

“...The South Vashon Island district now accounts for a somewhat larger share of weekday PM peak trip origins and destinations than it did in 1999...”

As found on most of the other Vashon Island routes, the South Vashon Island district now accounts for a somewhat larger share of weekday PM peak trip origins and destinations than it did in 1999, which may be indicative of increasing growth and residential density in the more southern parts of the island.

Table 7-11 and Table 7-12 summarize origin and destination trips and shares specific to mode — walk-on boardings and in-vehicle boardings. The majority of westbound riders that boarded as pedestrians were headed

for districts relatively closer to the ferry terminal, including Other South Kitsap County and Greater Bremerton. The most common destination westbound for those walking on the ferry during the weekday PM peak period was the Other South Kitsap County district, with

an 82% share. For in-vehicle boardings, the most popular destination was also the Other Sound Kitsap County district with just over 49% of the total for westbound travel. Both walk-on and in-vehicle riders predominately originated in the north Vashon Island area, at 59% and 64%, respectively. These travel patterns can be seen graphically in Figure 7-3.

Eastbound PM peak period trip origins and destinations by boarding mode can be seen in Figure 7-4. The South Vashon area was the destination for just over 67% of the walk-on riders headed eastbound (see Table 7-13), while the North Vashon area (with 71% of the total) was the most frequent destination for in-vehicle riders (see Table 7-14). The Other South Kitsap County district had the highest share of eastbound origins for both boarding modes, with 67% for walk-on riders and 30% for in-vehicle riders.

Table 7-7
Southworth-Vashon O-D Trip Table
Weekday PM Peak Period – Westbound – All Boarding Modes (2003)

ORIGIN	DESTINATION	Greater Port Orchard	Other South Kitsap County	Greater Bremerton	North/Other Central Kitsap County	West Pierce County	Mason County	All Other Places	Origin Totals	Origin Shares
		4703	4704	4705	4706	4707	4708	4717		
North Vashon Island	4701	8	88	14	2	10	5	2	130	60.7%
South Vashon Island	4702	10	59		2		2	10	84	39.3%
Destination Totals		18	148	14	5	10	7	12	214	100.0%
Destination Shares		8.2%	69.0%	6.6%	2.3%	4.7%	3.5%	5.8%	100.0%	

Table 7-8
Southworth-Vashon O-D Trip Table Differences 2003 vs. 1999
Weekday PM Peak Period – Westbound – All Boarding Modes

ORIGIN	DESTINATION	Greater Port Orchard	Other South Kitsap County	Greater Bremerton	North/Other Central Kitsap County	West Pierce County	Mason County	All Other Places	Origin Totals vs. 1999	Origin Growth % vs. 1999
		4703	4704	4705	4706	4707	4708	4717		
North Vashon Island	4701	-18	+40	+4	-5	+10	-2	-4	+25	23.5%
South Vashon Island	4702	+5	+40		-4		+1	+5	+47	126.6%
Destination Totals vs. 1999		-13	+81	+4	-9	+10	-2	+1	+72	50.4%
Destination Growth % vs. 1999		-42.4%	120.7%	37.4%	-64.8%	N/A	-19.1%	6.8%	50.4%	

Figure 7-1
Vashon to Southworth (Westbound) PM Peak Trips
by Boarding Mode

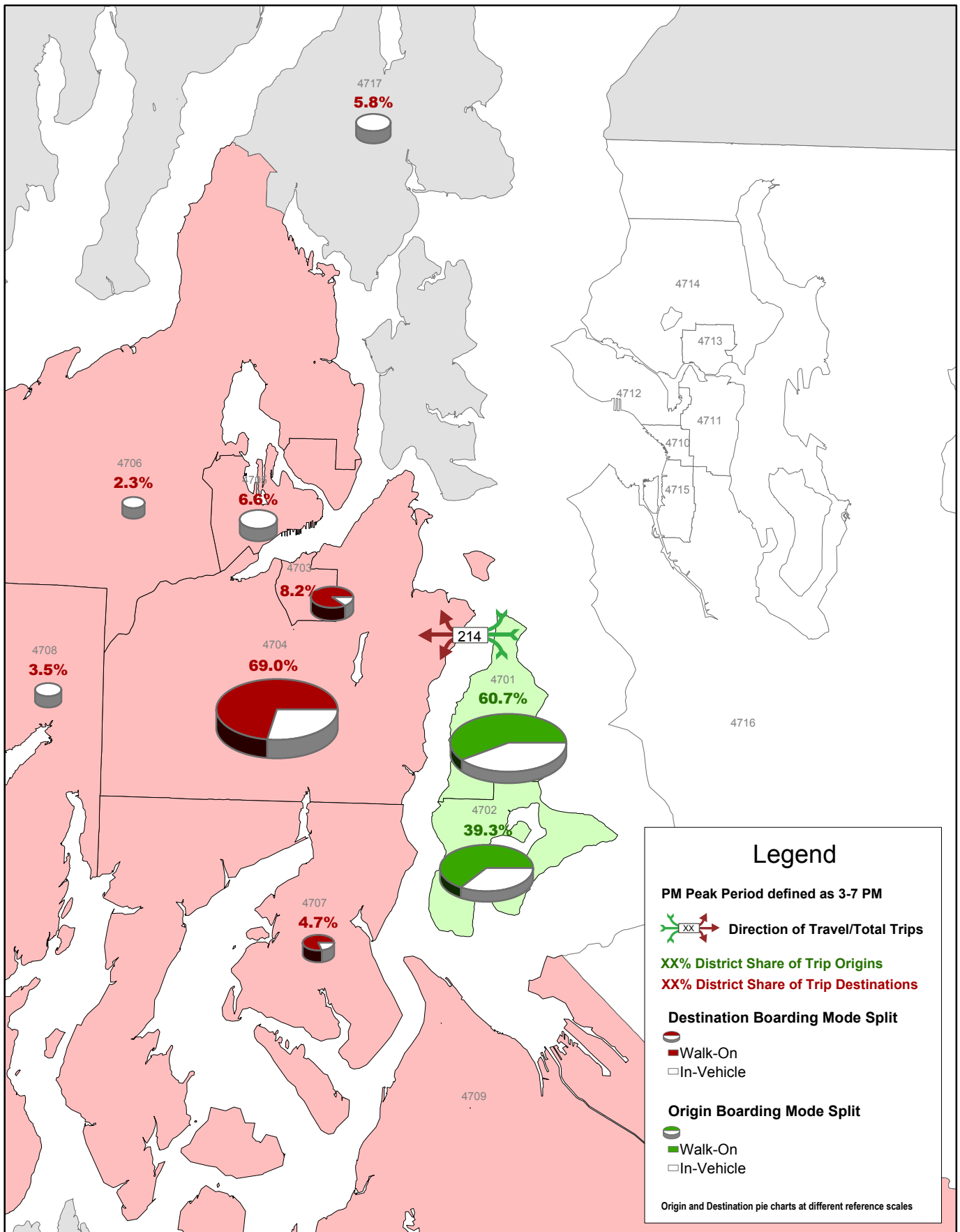


Table 7-9
Southworth-Vashon O-D Trip Table
Weekday PM Peak Period – Eastbound – All Boarding Modes (2003)

	DESTINATION			Origin Totals	Origin Shares
		North Vashon Island 4701	South Vashon Island 4702		
Greater Port Orchard	4703	4	4	8	9.8%
Other South Kitsap County	4704	8	20	28	35.1%
Greater Bremerton	4705	20		20	25.4%
North/Other Central Kitsap County	4706	8		8	9.8%
Mason County	4708			—	0.0%
All Other Places	4717	12	4	16	20.0%
Destination Totals		52	28	80	100.0%
Destination Shares		64.9%	35.1%	100.0%	

Table 7-10
Southworth-Vashon O-D Trip Table Differences 2003 vs. 1999
Weekday PM Peak Period – Eastbound – All Boarding Modes

	DESTINATION			Origin Totals vs. 1999	Origin Growth % vs. 1999
		North Vashon Island 4701	South Vashon Island 4702		
Greater Port Orchard	4703	-14	-1	-14	-64.7%
Other South Kitsap County	4704	-50	+15	-34	-54.9%
Greater Bremerton	4705	-9	-13	-22	-52.4%
North/Other Central Kitsap County	4706	-44	-15	-59	-88.2%
Mason County	4708	-7		-7	-100.0%
All Other Places	4717	+3	-10	-7	-30.2%
Destination Totals vs. 1999		-121	-23	-144	-64.2%
Destination Growth % vs. 1999		-69.9%	-45.0%	-64.2%	

Figure 7-2
Southworth to Vashon (Eastbound) PM Peak Trips
by Boarding Mode

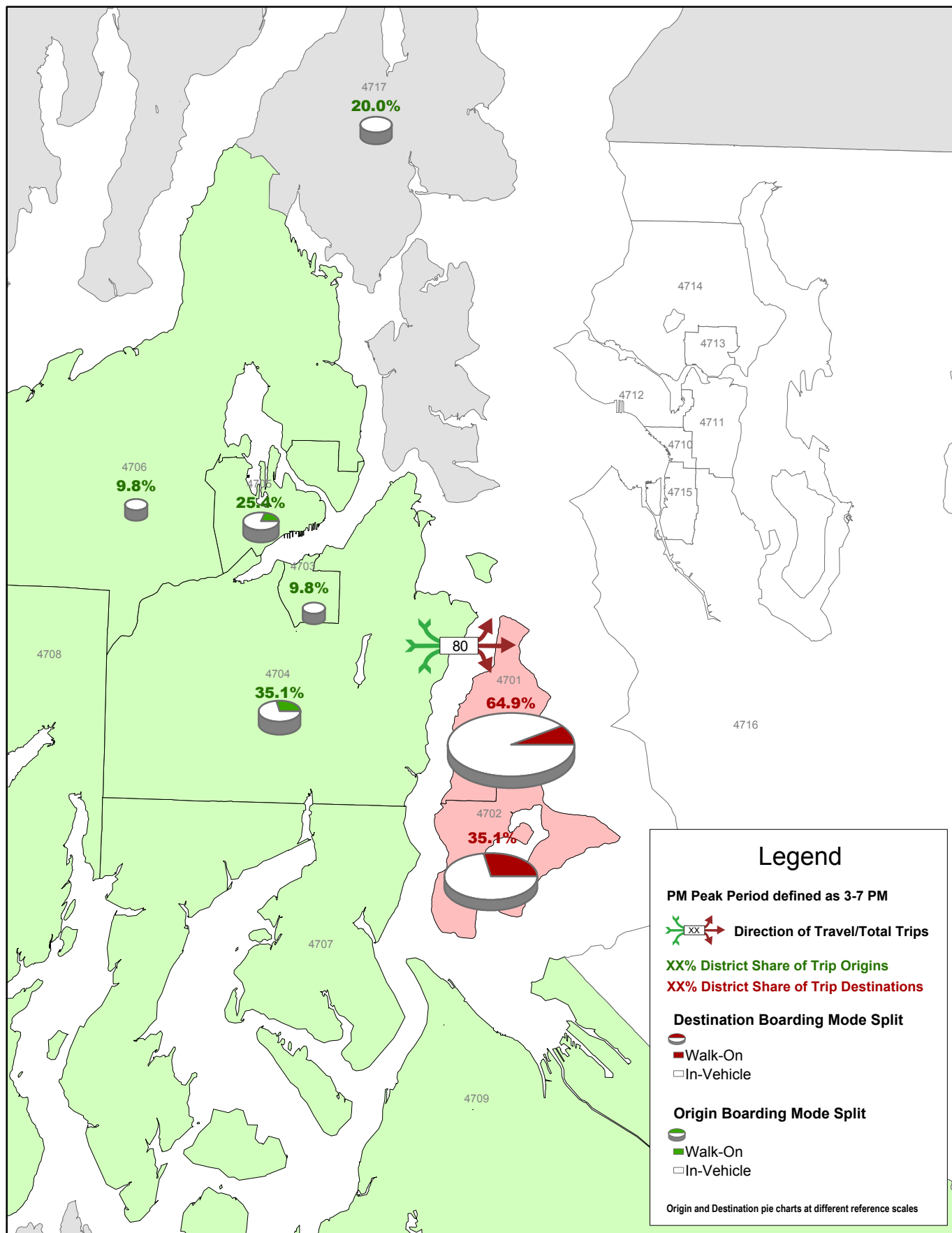


Table 7-11
Southworth-Vashon O-D Trip Table
Weekday PM Peak Period – Westbound – Walk-On Boardings (2003)

		DESTINATION			Origin Totals	Origin Shares
ORIGIN		Greater Port Orchard 4703	Other South Kitsap County 4704	West Pierce County 4707		
North Vashon Island	4701	8	60	8	75	58.8%
South Vashon Island	4702	8	45		53	41.2%
Destination Totals		15	105	8	128	100.0%
Destination Shares		11.8%	82.4%	5.9%	100.0%	

Table 7-12
Southworth-Vashon O-D Trip Table
Weekday PM Peak Period – Westbound – In-Vehicle Boardings (2003)

		DESTINATION							Origin Totals	Origin Shares
ORIGIN		Greater Port Orchard 4703	Other South Kitsap County 4704	Greater Bremerton 4705	North/Other Central Kitsap County 4706	West Pierce County 4707	Mason County 4708	All Other Places 4717		
North Vashon Island	4701		28	14	2	2	5	2	55	63.5%
South Vashon Island	4702	2	14		2		2	10	31	36.5%
Destination Totals		2	42	14	5	2	7	12	86	100.0%
Destination Shares		2.9%	49.2%	16.4%	5.7%	2.9%	8.6%	14.3%	100.0%	

Figure 7-3
Vashon to Southworth (Westbound) PM Peak Period
Trip Origins & Destinations by Boarding Mode

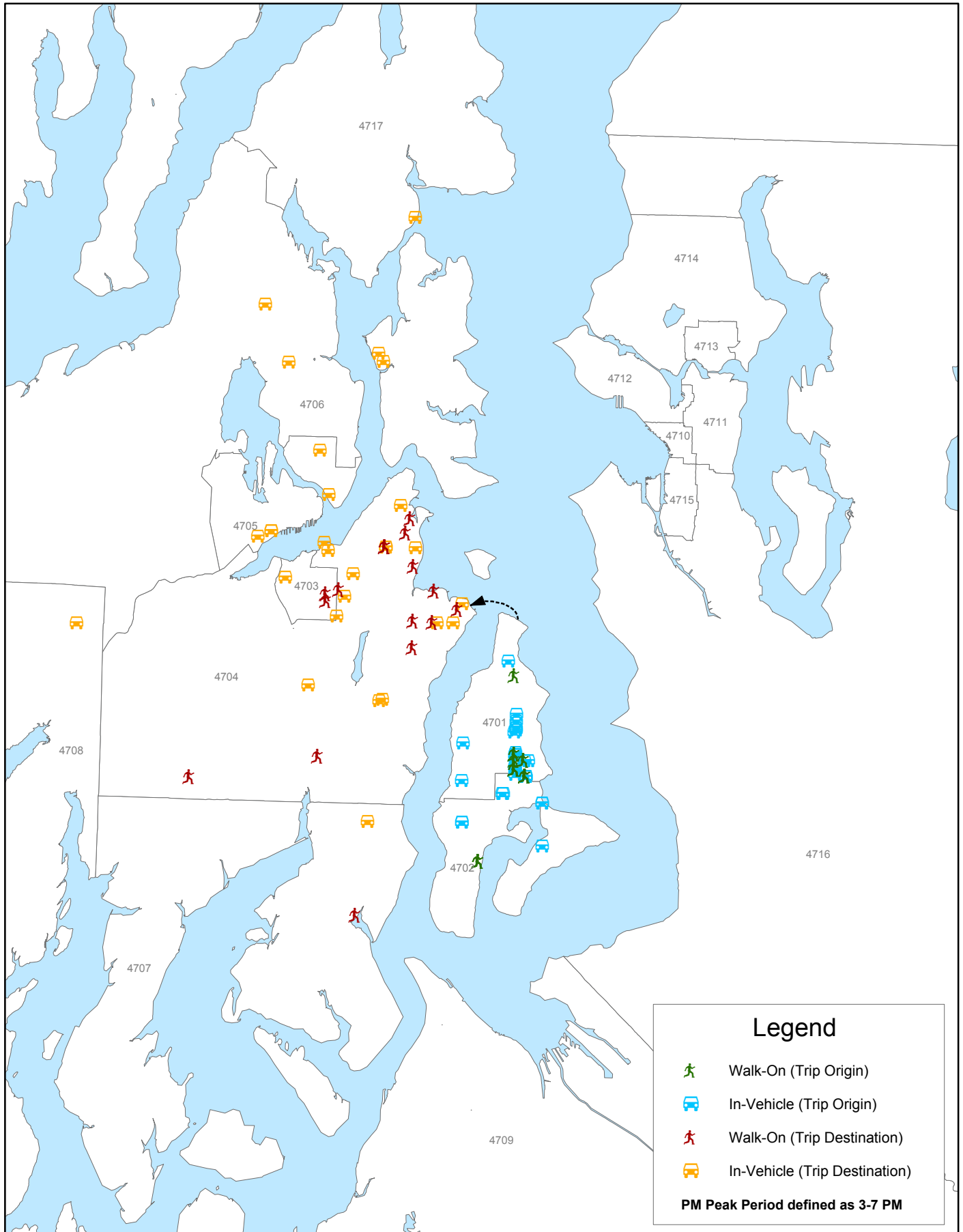


Table 7-13
Southworth-Vashon O-D Trip Table
Weekday PM Peak Period – Eastbound – Walk-On Boardings (2003)

	DESTINATION	North Vashon Island		Origin Totals	Origin Shares
		4701	4702		
ORIGIN					
Other South Kitsap County	4704		8	8	66.7%
Greater Bremerton	4705	4		4	33.3%
Destination Totals		4	8	12	100.0%
Destination Shares		33.3%	66.7%	100.0%	

Table 7-14
Southworth-Vashon O-D Trip Table
Weekday PM Peak Period – Eastbound – In-Vehicle Boardings (2003)

	DESTINATION	North Vashon Island		Origin Totals	Origin Shares
		4701	4702		
ORIGIN					
Greater Port Orchard	4703	4	4	8	11.5%
Other South Kitsap County	4704	8	12	20	29.5%
Greater Bremerton	4705	16		16	24.0%
North/Other Central Kitsap County	4706	8		8	11.5%
All Other Places	4717	12	4	16	23.5%
Destination Totals		48	20	68	100.0%
Destination Shares		70.5%	29.5%	100.0%	

Figure 7-4
Southworth to Vashon (Eastbound) PM Peak Period
Trip Origins & Destinations by Boarding Mode

